

Serial No. 10/661,190
Atty. Doc. No. 2001P02708WOUS

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REMARKS

Claims 9-28 are pending in this application. In view of the numerous and significant objections and rejections of the claims and disclosure, all pending claims are cancelled herein and new claims 29-31 are presented for examination. Further, the specification is amended to overcome the objection and rejection under 35 USC 112.

New independent claim 29 is directed to a method of manufacture comprising: casting a main body of a nickel or cobalt based superalloy parent material; testing a surface of the main body for the presence of a corrosion area of oxidized carbides or sulfidized parent material areas using eddy-current testing; removing the corrosion area from the surface of the main body by a first cleaning process effective to remove the oxidized carbides or sulfidized parent material areas; after the corrosion area is removed, activating the surface of the main body for an application of an anti-corrosive coating by a second cleaning process different than the first cleaning process, the second cleaning process being ineffective for removing the corrosion area in the absence of the first cleaning process; and applying the anti-corrosive coating.

Support for this claim is found in the specification at page 7, lines 10-21 and lines 28-32; page 9, lines 13-20; and page 10, lines 3-7. The present inventors have recognized that existing surface activation processes used prior to the application of anti-corrosion coatings are ineffective to remove the types of corrosion that are formed during the casting of superalloy components. As a result, the coatings may fail in the areas of the corrosion. The present inventors have also recognized that, by using a different cleaning process to remove the corrosion prior to the surface activation step, improved reliability of the coating may be achieved. The prior art does not teach or suggest such a combination of steps.

New dependent claims 30 adds the further limitations that the first cleaning process comprises grinding and the second cleaning process comprises a sputter process. Support for this claim is found at page 7, lines 13-16 and line 29 and page 10, lines 5-7. The prior art does not teach or suggest such a combination of steps.

New dependent claim 31 adds the further limitation of determining a depth of the corrosion area prior to the step of removing the corrosion area by operating the eddy-current

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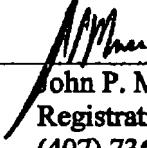
testing at two different frequencies. Support for this claim is found at page 5, lines 16-31. The prior art does not teach or suggest such a combination of steps.

Conclusion:

Applicants respectfully request allowance of the present application in view of the foregoing amendments and arguments. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

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